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The effect of Ableton model to developing some motor abilities and learning the technical performance of football shooting skill for students

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Abstract

The importance of the current research is clear that this study provides a new model for teaching physical education lesson, and researchers want to know the extent of its impact on developing some motor abilities and learning the skill of football shooting for students.

The research aims to identify the effect of the Ableton model on some motor abilities and to learn the technical performance of the football shooting skill for students. And to identify the preference of differences between the experimental and control groups in some motor abilities and to learn the technical performance of the skill of football shooting for students.

The research community was determined from the students of the first stage in the College of Physical Education and Sports Sciences, University of Kerbala for the academic world (2021-2022), and their number is (127) students, divided into (4) people (A-B-C-D) and in a random way by lottery method. Choosing Division (B) as an experimental group and Division (C) as a control group, as the researchers conducted a field experiment on a sample of (30) students and (15) students for each group.

Among the most important conclusions reached by the researchers is that the Ableton model and the method followed by the subject teacher had a positive effect in developing some motor abilities and learning the technical performance of the skill of football shooting for students, and that there is a preference for the experimental group over the control group in the post tests in developing some motor abilities. And learn the technical performance of the skill of football shooting for students.

Keywords: Ableton model to developing, people

1. Introduction

Modern learning models are one of the main axes and pillars in the process of learning and directing the lesson of physical education, and these models have been strikingly numerous in order to meet the different levels, gender and desires, to achieve an exciting and stimulating learning that takes the hands of students to learn.

One of these models is the Appleton model, which is one of the active constructive educational models that help learners to solve problems and control their thinking and encourage them to search, investigate and question to find solutions by exploiting their mental abilities to think about the problem, which develops their various skills, especially in making decisions and thinking about solving problems. This is achieved through stages the four model. In view of the foregoing, physical education teachers must choose the best teaching models to improve the basic skills better for games in general and football in particular in those institutions through the systematic lesson.

And that the performance of the football shooting skill, in turn, requires a high level of motor abilities and the extent of the correlation between each other in order to perform the ideal and effective performance of this skill. Therefore, there must be educational units that contain physical exercises that help develop these abilities and create an atmosphere of work in the service of developing these abilities and learning this important skill, and this is what this model will provide in its four stages. (Al-Jubouri, Z. H. F., & Hussein, A. R. A. (2022) ^[9]

The football activity is one of the popular activities that contains many skills circulating among the students, especially in this age group, as most of the students practice football by joining the popular football teams and clubs, and here comes the role of the teacher as a corrector for the skill performance and encouraging the students to this event This will only be when the teacher understands the use of models that stimulate learning, including the model used in this study.

The importance of the current research is that this study provides a new model for teaching physical education lesson, and researchers want to know the extent of its impact on developing some motor abilities and learning the skill of football shooting for students.

1.1 Research problem

Through the experience of one of the researchers being a football player for several clubs and a football teacher at the College of Physical Education and Sports Sciences / University of Karbala, and the experience of other researchers as they are teachers, they noticed a fluctuation in the level of students' performance by learning the basic skills of this event, especially on the practical side. Using modern teaching methods and models that simulate the learner's mind and help them effectively solve the problems they face. Therefore, it is necessary to use a new model, which is the Ableton model, which is one of the modern structural models, which the researchers hope will make a change in the form of performance to good (ideal) performance through the educational units prepared by the researchers to develop some motor abilities and learn the skill of football shooting for students.

1.2 Research objectives

- Identify the effect of Ableton's model on some motor abilities and learning the technical performance of students' football shooting skill.
- Identify the preference of differences between the experimental and control groups in some motor abilities and learning the technical performance of the football shooting skill for students.

1.3 Research hypothesis

- There are statistically significant differences between the pre and post tests for the experimental and control groups and in favor of the post test in some motor abilities and learning technical performance for students' football shooting skill.
- There are statistically significant differences between the post-tests of the experimental and control groups in favor of the experimental group in some motor abilities and learning technical performance for students' football shooting skill.

1.4 Research fields

The human field: Students of the second stage in the College of Physical Education and Sports Sciences - University of Kerbala for the academic year 2021-2022.

Time field: from 26/1/2022 to 22/2/2022.

Spatial field: The fenced sports arena in the College of Physical Education and Sports Sciences University of Kerbala.

1.5 Define the terms

1.5.1 Appleton's model: "It is the model that is characterized by four features that reflect the main features of any structural model, which are sorting the learner's ideas, processing information, information mining, and the societal context". (Al-Lami, Salah Khalifa Khadad & Amir, Ali Abbas, 2017, p. 73)^[1]

2. Research methodology and field procedures

2.1 Research Methodology

The researchers used the experimental method by designing the experimental and control groups with pre and post tests for its relevance to the nature and problem of the research.

2.2 Community and sample research

The research community was determined from the students of the first stage in the College of Physical Education and Sports Sciences, University of Karbala for the academic world (2021-2022), numbering (127) students, divided into (4) divisions, namely (A-B-C-D) and in a random way by lottery method. Choosing section (B) as the experimental group and section (C) as the control group. As the researchers conducted a field experiment on a sample of (30) students, with (15) students for each group, and the sample percentage from the original community was (23.62), and (10) students were chosen to represent the pilot experiment sample, and table (1) shows the number of the community The research, the research sample, the participants in the pilot experiment, as well as their percentages.

2.3 The homogeneity of the sample and the equivalence of the two research groups

2.3.1 Sample homogeneity: The homogeneity of the research sample was carried out in its experimental and control groups in variables (mass, length) and table (1) shows the arithmetic means, standard deviations, and the value of the skew coefficient for the variables adopted in homogeneity.

Table 1: Shows the homogeneity of the research sample.

Variables	Unit of measure	Mean	Std. deviation	Skew ness	Sig
Length	Cm	168.2	3.8	0.94	Homogeneous
Mass	Kg	68.41	3	0.41	Homogeneous

2.3.2 Equivalence of the two research groups:

For the purpose of determining the starting point, the researchers found parity between the two groups using the (t) test for independent samples in the study variables, and Table (2) shows this.

Table 2: Shows the equivalence of the two research groups in the variables under investigation.

Variables	Experimental group		Control group		T value Calculated	Sig type
	Mean	Std. deviation	Mean	Std. deviation		
Coordination	6.64	0.99	6.86	0.94	0,68	Non sig
Moving balance	30.33	8.54	31.33	9.15	1,73	Non sig
Agility	10.4	0.62	10.7	0.7	0.645	Non sig
shooting	6.36	0.91	6.12	0.81	0.692	Non sig

The tabular value (t) at the degree of freedom (28) and the level of significance (0.05) is (2.02).

By noting the calculated (t) values for the research variables, we find that they are less than the tabular (t) value of (2,02) at the degree of freedom (28) and the level of significance (0.05), which indicates that there are no significant differences and this means that the two groups are equivalent in the variables search.

2.4 Means of data collection, information, devices and tools

2.4.1 Means of collecting data and information:

- Arab and foreign references and sources.
- Personal interviews.
- Observation.
- Tests and measurements.

2.4.2 Tools and equipment used in the research.

- Measuring tape.
- Medical scale.
- Chalk.
- Whistle.
- White powder.
- Two (2) manual stopwatches.
- Scientific calculator.
- A football field, a football goal divided on both sides only into eight areas measuring (80 x 80) cm.
- (5) Footballs.
- Flat ground.

2.5 Tests used in the research:

1. Coordination Test: (Hassanein, Muhammad Sobhi, 1995, p. 416)

- Numbered circuit test

The purpose of the test: To measure the compatibility of the legs and eyes.

Tools and capabilities: a stopwatch, eight circles are drawn on the ground, each with a diameter of (60 cm).

- Description of the performance: The tester stands inside the circle (1), when he hears the start signal, he jumps with both feet to the circle (2), then to the circle (3)..... and so on until the circle (8).

Register: The laboratory records the time it takes to travel through the eight circuits.

2. Moving Balance Test: (Hassanein, Muhammad Sobhi, 2003, p. 352)

- Jump test over tags

The purpose of the test: to measure balance during and after movement.

Tools and capabilities: tape measure, 11 markers (cones)

Description of performance: The tester stands on the starting line with the right foot, then stands from standing on the mark (1) with the left instep, and tries to remain in this position, then jumps to the mark (2) to stand on the right instep and so on until he reaches the last mark with the same Style in every dart.

Register: The lab will score 10 points for each jump and dash attempt.

3. Agility Test (Qais Naji, Bastawisi, 1984, p. 323)

Zigzag run between the poles

The purpose of the test: to measure agility

- Tools and capabilities: 5 numbers, stopwatch

- Performance description: From standing at the starting line (with a width of one meter), which is 3 meters away from the first obstacle - running between the five pillars, with a distance of one meter between each obstacle and another, the time in the two rounds is calculated for the player.

- Calculation of grades: time is calculated for two continuous cycles as an indicator of agility.

4. Football shooting test: (Al-Khashab, Zuhair & Al-Hayani, Muhammad Khudair Asmar, 1999, p. 214)^[4]

- Test name: The Football stability shooting test.

- Test objective: To measure the accuracy of football shooting.

- Tools and capabilities: a football field, a football goal divided on both sides only into eight areas measuring (80 x 80) cm, (5) footballs, a tape measure, a whistle.

Description of performance: (5) footballs are placed at a distance of (11) m, i.e. on the penalty point in a straight line, and as shown in the figure below, as the player aims the five balls on the divided areas of the goal trying to insert the ball into it. The squares of degree (3) are the highest.

Registration method

- The laboratory is awarded (3) degrees in the case of inserting the ball into the squares bearing the number (3).
- The laboratory shall be awarded (2) two marks in case the ball is inserted into the squares bearing the number (2).
- The laboratory is awarded (1) a score in case the ball is inserted into the squares bearing the number (1).
- The laboratory does not award any score if the ball is not inserted into any of the squares.

Number of attempts: The tester gives one attempt with the five balls.

2-6 Experimental Experiment

The researchers conducted the reconnaissance experiment on Thursday, on (3/2/2022), on a sample of (10) students who were not from the research sample and from the community of origin, and the aim is to:

- Identifying the difficulties that the researcher faces during the main experiment.
- Knowing the time allotted for conducting the tests.
- Ensure the safety of sports equipment.
- Knowing the requirements and times of educational units.
- Ensure the scientific bases of the tests used.

2.7 Scientific foundations tests

2.7.1 Validity: In extracting the validity of the tests, the researchers relied on the validity of the content by presenting the tests to a group of experts and specialists..

2.7.2 Reliability: To calculate the reliability coefficient, the

test method is chosen and the test is re-applied. The tests were applied to a sample of (10) students from outside the research sample, and these tests were repeated after (7) days of the first tests and on the same sample. As shown in Table (3).

Table 3: Shows the stability coefficient of the tests under consideration:

N	Tests	Measuring unit	Reliability coefficient
1	Coordination	Second	0.88
2	Moving balance	Degree	0.82
3	Agility	Second	0.84
4	Shooting	Degree	0.88

2.8 Field Research Procedures

2.8.1 Pre-tests

Pre -tests were conducted on Thursday, 10/2/2022 in the fenced outdoor arena at the College of Physical Education and Sports Sciences / University of Kerbala for some motor abilities and learning the skill of football Shooting for students and in the presence of the assistant work team.

2.8.2 The general framework for the implementation of educational units according to the Ableton model:

The implementation of the educational units prepared according to the Ableton model began on the students of the experimental group for the academic year (2021-2022) starting on Wednesday (16/2/2022), and the last educational unit was on Thursday (3/3/2022), and the units were The instruction for the experimental group was taken on Wednesday and Thursday of each week, while the units for the control group were taken on the same day of each week at twelve noon.

The educational units were prepared using the Ableton model to learn the football Shooting skill of the experimental group, with (6) educational units, for a period of (3) weeks, and with two educational units per week, and the time of the educational unit was set at a time of (90) minutes. The division of this time was as follows (the time of the preparatory section (15 minutes) and includes (the introduction 5 minutes - general and private warm-up 10 minutes), (the time of the main section (70 minutes) and

includes (the educational aspect (20 minutes) and the practical side (50 minutes), and the time of the closing section was (5 d), and the main section of the educational unit (the educational part, the practical part) was chosen through which the four stages of the model were applied.

□ **Preparatory section:** (15 minutes)

Included:-

Introduction: (5 minutes)

General and private warm-up: (10 minutes)

□ **Main Section:** 70 minutes

The educational aspect: (20 minutes): This aspect included:

- **The first stage 20 d:** (sorting the ideas that the learner has)

The practical aspect: (50 minutes): This aspect included the other three steps of the model, which are:

- **Second stage 15 d:** (information processing stage)

- **The third stage 20 d:** (information exploration stage)

- **Fourth stage 15 d:** (Social context stage)

- **Final section:** (5 minutes) calming exercises and small games

2.8.3 Post-tests

After completing the educational units, the physical and skill post tests were conducted on Wednesday, 9/3/2022, under the same conditions in which the pre-tests were conducted, and in the presence of the same auxiliary team.

2.9. Statistical means

1- Arithmetic mean

2- Standard deviation

3- Coefficient of Variation

4- Simple Correlation Coefficient (Pearson)

5- T for conjugated samples

6- T for independent samples

3. Presentation, analysis and discussion of the results

3.1. Presentation and analysis of the results of the pre and post tests for the experimental group in developing some motor abilities and testing the football shooting skill for students

Table 4: Shows the arithmetic means, standard deviations, and the calculated (t) value between the results of the pre and post tests for tests of some motor abilities and the football shooting skill for students of the experimental group:

Variables	Pre-test		Post-test		T value Calculated	Sig type
	Mean	Std. deviation	Mean	Std. deviation		
Coordination	6.64	0.99	5.53	0.51	4.10	Sig
Moving balance	30.33	8.54	52.66	11.62	5.15	Sig
Agility	10.4	0.62	9.50	0.65	4.15	Sig
Shooting	6.36	0.91	9.6	1.2	11.67	Sig

* Tabular value (t) at the level of significance (0.05) and the degree of freedom (14) is (2.14)

Table (4) shows the arithmetic means, standard deviations, and the (t) value calculated between the two measurements, pre and post, in the tests under study for the experimental group. The results showed that all the differences for the tests are significant and in favor of the post-measurement because the calculated (t) value is greater than the tabular (t) value of (2.14) and with a degree of freedom (14) and below the level of significance (0.05), and this indicates a

significant difference in favor of the post-test in All variables are under investigation.

3.2. Presentation and analysis of the results of the pre and post tests for the control group in developing some motor abilities and testing the football shooting skill for students

Table 5: Shows the arithmetic means, standard deviations, and (t) value calculated between the results of the pre and post tests for tests of some motor abilities and learning the football Shooting skill for the students of the control group.

Variables	Pre-test		Post-test		T value Calculated	Sig type
	Mean	Std. deviation	Mean	Std. deviation		
Coordination	6.86	0.94	6.19	0.75	2.90	Sig
Moving balance	31.33	9.15	41.33	8.33	7.24	Sig
Agility	10.7	0.7	10.14	0.69	3.33	Sig
Shooting	6.12	0.81	7.36	0.91	12.79	Sig

* Tabular value (t) at the level of significance (0.05) and the degree of freedom (14) is (2.14)

Table (5) shows the arithmetic means, standard deviations, and the calculated (t) value between the pre and post measurements in the tests under study for the control group, the results showed that all the differences for the tests are significant and in favor of the post-measurement because the calculated (t) value is greater than the tabular (t) value of (2.14), with a degree of freedom (14) and below the level of

significance (0.05), and this indicates a significant difference in favor of the post test.

3.3. Presentation and analysis of the results of the post-tests for the experimental and control groups in developing some motor abilities and testing the football shooting skill for students

Table 6: Shows the significance of the differences between the post-tests of the two groups in the tests of some motor abilities and learning technical performance for the skill of football Shooting for students.

Variables	Control		Experimental		T value Calculated	Sig type
	Mean	Std. deviation	Mean	Std. deviation		
Coordination	6.19	0.75	5.53	0.51	2.79	Sig
Moving balance	41.33	8.33	52.66	11.62	3.06	Sig
Agility	10.14	0.69	9.5	0.65	2.75	Sig
Shooting	7.36	0.91	9.6	1.2	5.87	Sig

*Table value (t) at the level of significance (0.05) and degree of freedom (28) is (2.02)

Table (6) shows the arithmetic means, standard deviations, and the calculated (t) value between the post-test in the tests under consideration for the experimental and control groups. The results showed that all the differences for the tests are significant and in favor of the experimental group because the calculated (t) value is greater than the tabular (t) value of (2.02) and with a degree of freedom (28) and below the level of significance (0.05), and this indicates a significant difference in favor of the experimental group in All variables are under investigation.

4. Discussing the results

Through what is mentioned in Tables (4, 5, 6), it is clear to us in Table (5) that the experimental group, used the Ableton model, as it makes the students the main axis around which the educational process revolves, as well as active participants in it, and their application of the exercises in the four stages of the model, which are (sorting the information in the students' possession, then processing the new information and experiences presented in the lesson, then searching for information, then societal context). independently is an encouraging factor in increasing students' motivation to perform and freedom in the practical application of activities, which made them feel independent, which leads to enhancing self-confidence and improving their view of themselves, this increases their motivation, so the student becomes more daring and challenging to meet the requirements of skill performance and then provide a better level of performance. "Caring for the learner and making him the focus of the educational process and the center of activity, respecting his opinions and abilities, and inundating him with kindness, acceptance and encouragement is a key factor that helps in learning". (Al-Moussawi, Abdullah Hassan, 2005, p. 119) [5]

As for the moral effect that was shown through the results shown in Table (4) for the control group that was used by

the subject teacher, it happened as a result of the subject teacher being exposed to the educational material on a regular basis and appropriate to the learners' abilities and their physical and skill capabilities, in addition to the seriousness and eagerness of the subject teacher To reach the acceptable degree of learning through the use of feedback during the implementation of the lesson, and the commitment of students to attend and their eagerness to participate in the lesson, which contributed to the high level of their learning.

And that this model is distinguished from the traditional method in that it is a good environment for developing students' motivation to learn motor skills through which the student can excel in motor abilities, and this serves the goal of this student, which is to win the competition or beat himself through his good performance or control the skill he learned, and in this On the other hand, Ahmed Amin Fawzi and Tariq Muhammad Badr Al-Din mentioned that "competition is a stimulating, directing and stimulating state of behavior and works to provoke and enhance the internal psychological energy towards achieving the goal". (Fawzy, Ahmed Amin & Al-Din, Tariq Muhammad Badr, 2001, p. 202) [6]

The results showed through table (6) that there are significant differences between the results of the post-test for the two experimental and control groups and in favor of the experimental group in the variables under consideration, as this model has clearly invested in the process of organizing thinking and searching for solutions and ideas significantly and contributed to achieving progress In the post-tests as well as practice, repetition and the use of various teaching aids contributed to the emergence of sound and sequential performance, and in this regard, this model contributed to achieving thinking in a more interactive way among the students of the experimental group, which was distinguished by providing the opportunity for students to

interact among themselves and find solutions.

And the reason for the superiority of the experimental group over the control group is that this model imposes on the learner to continue working without apathy or delay, because this causes him to weaken the level and then to fail and lose competition. on participation in competition-related learning activities". (Othman, Syed & Al-Sharqawi, Anwar, 1978), p. 197)^[7]

Likewise, the student at this stage of study needs to be given the opportunity to engage in interactive intellectual practice of playing situations, critique them, and analyze them to reach ideas that can be implemented independently. For students to learn and express their opinions and reveal their abilities gives them and gives them an opportunity to develop themselves and increase their experiences in deepening the subject, idea or skill, and understanding the relationships between its parts". (Asmar, Muhammad Khader & Hashem, Aqil Yahya, 2015, p.47)^[8]

The researcher also sees that there is a positive point that led to the superiority of the experimental group in some motor abilities, which is the positive environment that the researcher created when preparing his educational units according to the Ableton model through the application of the four stages of the model in these prepared units, as these units included the use of new educational means that did not They were unfamiliar before, as well as the diversification of educational exercises for skills, which made these units more exciting, interesting and fun for students, which led to their interaction and impulse to apply their contents with care, desire and rush.

5. Conclusions and recommendations

5.1 Conclusions

- 1- The Ableton model and the method followed by the subject teacher had a positive effect in developing some motor abilities and learning the technical performance of the football Shooting skill for students
- 2- There is a preference for the experimental group over the control group in the post tests in developing some motor abilities and learning the technical performance of the football shooting skill for students.

5.2 Recommendations

- 1- The necessity of using this model on the rest of the faculties of physical education and sports sciences, as it urged its effectiveness in its results.
- 2- The need to pay attention to the motor abilities of students, especially at this age.
- 3- Presenting the educational material on a regular basis and appropriate to the students' abilities and their physical and skill capabilities.
- 4- Conducting similar studies on other games using the Ableton model because of its positive results.

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